Math 233 Spring 2013

Cathedral Catholic High School

Time and Place: TWR 7:15-8:00 a.m. at Cathedral Catholic High School
M (some weeks) 7:15-8:00 a.m. at Cathedral Catholic High School

Instructor: Lynda Wynn

Phone Number: 849-2219

E-mail: lwynn@pointloma.edu

Office Number: S222

Cathedral Catholic OH: Monday – Friday 7:00-7:15 a.m.

You can also email me with any questions that you have.

Text: *Linear Algebra and Its Applications* (fourth edition)
by David Lay

Content:
A computational introduction to linear algebra with applications. A study of linear equations, matrix algebra, Euclidean spaces and subspaces, vector spaces, linear transformations, eigenvalues, eigenvectors, and inner products.

Learning Outcomes:

- Students will be able to apply their technical knowledge to solve problems.
- Students will be able to demonstrate facility with algebraic structures.
- Students will communicate effectively orally and in writing.
- Students will have an understanding of the historical development, contemporary progress and societal role of mathematics.

Grading:
Your grade for each course is based on:

Homework Exercises	300 points
2 Exams	400 points
A comprehensive final exam	300 points

Approximate minimal points required to obtain a given grade are:

	A	B	C	D
+		(875, 900)	(775, 800)	(675, 700)
	[925, 1000]	[825, 875]	[725, 775]	[625, 675]
-	[900, 925)	[800, 825)	[700, 725)	[600, 625)

Note that scores of 599 or lower will result in an F.

Homework:
Homework will be assigned each day at the end of class. All homework assigned in a week will be **due in class** the next Wednesday. No late homework will be accepted except by prior arrangement or with a documented emergency. Homework assignments are posted on my office door. The object of the homework is

to learn how to do the problems so I expect to see calculations on your homework using the terminology and methods of the class and not just the answer. A random selection (the same for all people) of the problems will be graded on any homework assignment.

Exams:
There are two in-class exams. If you do not take an exam you will receive a zero for it. Late exams may be taken only by prior arrangement or with a documented emergency. I must participate in the decision for you to miss an exam, this means that you need to phone me before missing an exam.

Final Exam: Date and Time
The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. Only in the case that a student is required to take three exams during the same day of finals week is an instructor authorized to change the exam date and time for that particular student. The final is cumulative and is given in class on **THURSDAY, MAY 2 FROM 7:00-8:00 A.M.** (class will meet early that day).

Attendance:
Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes in which a student is registered is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements to be met. There are no allowed or excused absences except when absences are necessitated by certain university-sponsored activities and are approved in writing by the Provost. Whenever the number of accumulated absences in a class, for any cause, exceeds ten percent of the total number of class meetings, the faculty member has the option of filing a written report to the Vice Provost for Academic Administration which may result in de-enrollment, pending any resolution of the excessive absences between the faculty member and the student…If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of W or WF (no grade). There are no refunds for courses where a de-enrollment was processed." (see catalog for full text)

Class Enrollment:
It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

Academic Accommodations:
While all students are expected to meet the minimum academic standards for completion of this course as established by the instructor, students with disabilities may require academic accommodations. At Point Loma Nazarene University, students requesting academic accommodations must file documentation with the Disability Resource Center (DRC), located in the Bond Academic Center. Once the student files documentation, the Disability Resource Center will contact the student's instructors and provide written recommendations for reasonable and appropriate accommodations to meet the individual needs of the student. This policy assists the university in its commitment to full compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities (ADA) Act of 1990, and ADA Amendments Act of 2008, all of which prohibit discrimination against students with disabilities and guarantees all qualified students equal access to and benefits of PLNU programs and activities.

Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.

Academic Honesty:
The Point Loma Nazarene University community holds the highest standards of honesty and integrity in all aspects of university life. Academic honesty and integrity are strong values among faculty and students alike.

Any violation of the university's commitment is a serious affront to the very nature of Point Loma's mission and purpose.

Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. Such acts include plagiarism, copying of class assignments, and copying or other fraudulent behavior on examinations. For more details on PLNU's policy go to: http://www.pointloma.edu/experience/academics/catalogs/undergraduate-catalog/point-loma-education/academic-policies

A student who is caught cheating on any item of work will receive a zero on that item and may receive an "F" for the semester. See the PLNU Catalog for a further explanation of the PLNU procedures for academic dishonesty.

You may work with and study with other people in the class, just turn in your own work for every assignment.

Monday	Tuesday	Wednesday	Thursday	Friday
7-Jan No School CCHS	8-Jan No School CCHS	9-Jan Introduction	10-Jan 1.1 Linear Equations	11-Jan
14-Jan Monday Meeting 1.2 Row Reduction and RE	15-Jan 1.3 Vector Equations	16-Jan 1.3 Vector Equations 1.4 Matrix Equations	17-Jan 1.4 Matrix Equations	18-Jan
21-Jan **MLK DAY**	22-Jan 1.5 Solutions to Linear Eqns.	23-Jan 1.5 Solutions to Linear Eqns. 1.7 Linear Independence	24-Jan 1.7 Linear Independence	25-Jan
28-Jan Monday Meeting 1.8 Linear Transformations	29-Jan 1.8 Linear Transformations 1.9 Linear Transformations	30-Jan 1.9 Linear Transformations	31-Jan 2.1 Matrix Operations	1-Feb
4-Feb	5-Feb 2.2 Matrix Inverses	6-Feb 2.3 Invertible Matrices	7-Feb 2.5 Matrix Factorization	8-Feb
11-Feb Monday Meeting 2.5 Matrix Factorization	12-Feb Review for Exam	13-Feb **EXAM #1**	14-Feb Go over exam	15-Feb
18-Feb No School CCHS	19-Feb Determinant Project	20-Feb Determinant Project	21-Feb Determinant Project 3.3 Cramer's Rule Discussion	22-Feb
25-Feb Monday Meeting 4.1 Vector Spaces	26-Feb 4.1 Vector Spaces 4.2 Null and Column Spaces	27-Feb 4.3 Linear Independent Sets	28-Feb 4.3 Bases	1-Mar
4-Mar No School PLNU	5-Mar No School PLNU	6-Mar No School PLNU	7-Mar No School PLNU	8-Mar No School PLNU
11-Mar Monday Meeting 4.4 Coordinate Systems	12-Mar 4.5 Dimension of VS	13-Mar 4.5 Dimension of VS 4.6 Rank of VS	14-Mar 4.6 Rank of VS	15-Mar
18-Mar No School CCHS	19-Mar 4.7 Change of Basis	20-Mar 5.1 Eigenvectors and values	21-Mar 5.2 Characteristic Equation	22-Mar
25-Mar Monday Meeting Review for Exam	26-Mar **EXAM #2**	27-Mar 5.2 Characteristic Equation	28-Mar **EASTER**	29-Mar **EASTER**
1-Apr No School CCHS	2-Apr No School CCHS	3-Apr No School CCHS	4-Apr No School CCHS	5-Apr No School CCHS
8-Apr Monday Meeting 5.3 Diagonalization	9-Apr 5.4 Eigenvectors and LT	10-Apr 5.4 Eigenvectors and LT	11-Apr 6.1 Inner Products	12-Apr
15-Apr	16-Apr 6.2 Orthogonal Sets	17-Apr 6.3 Orthogonal Projections	18-Apr 6.3 Orthogonal Projections	19-Apr
22-Apr Monday Meeting 6.4 Gram-Schmidt Process	23-Apr 6.4 Gram-Schmidt Process	24-Apr 6.5 Least Squares Problems	25-Apr 6.5 Least Squares Problems	26-Apr
29-Apr No School CCHS	30-Apr Final Exam Review	1-May Final Exam Review	2-May **FINAL EXAM 7:00-8:00 A.M.**	3-May